Claims:

1. A steering aid system for controlling altitude and horizontal speed, perpendicular to the vertical, of an aircraft (4; 152), in which altitude and horizontal speed are controlled by varying the pitch of the aircraft and/or the power developed by the lifting means (10; 156) of the said aircraft,

   characterised in that it comprises:

   - a measuring device (22; 180) capable of delivering a measured signal as a function simultaneously of both the altitude of the aircraft and the horizontal speed of the aircraft;

   -an identical pre-set reference value (26; 182) for the altitude and the horizontal speed of the aircraft, this value being independent of variations in the said measured signal, and

   - means (20; 178) forming a servoloop for slaving the signal to the said reference value, these means being capable of automatically varying the pitch and/or the power developed by the lifting means for the purpose of slaving the measured signal to the reference value.

2. A system according to Claim 1, characterised in that the means (20; 178) forming the servoloop comprise:

   - a unit (96) for controlling either only the pitch or only the power developed by the lifting means (10; 156) as a function of an input control, and

   - a subtractor (94) capable of calculating the said input control from the difference between the said signal and the said reference value in such a way as to compensate for this difference.

3. A system according to either of the preceding claims, characterised in that the said measured signal is representative of the quotient of the horizontal speed divided by the altitude of the aircraft.

4. A system according to Claim 3, characterised in that the measuring device comprises:

- a first and a second sensor (30, 32), each capable of measuring variations (44) in a characteristic of the surface flown over, each sensor having a line of sight (34, 36) which is angularly offset by an angle $\Delta\phi$ from that of the other sensor, in such a way that the first and the second sensors (30, 32) successively measure an identical variation during a displacement of the aircraft, and
- a processing unit (50) capable of calculating the time interval ΔT elapsing between measurement of a said variation by the first sensor and measurement of the same variation by the second sensor and of delivering, as a measured signal, a signal the value of which is a decreasing and monotonic function of this calculated time interval.

5. A system according to Claim 4, characterised in that the signal delivered by the processing unit as a measured signal is representative of the quotient of the relative angular offset $\Delta\phi$ of the lines of sight (34, 36) divided by the calculated time interval ΔT.

6. A system according to Claim 4 or 5, characterised in that the said characteristic is the intensity of electromagnetic radiation within a spectral zone between the ultraviolet and the millimetric wavelengths emitted by the surface flown over.

7. A system according to Claim 6, characterised in that the first and second sensors (30, 32) are in each case a photosensor.

8. A system according to any one of Claims 4 to 7, characterised in that the first and second sensors (30, 32) are associated with an automatic device (52) for maintaining a constant orientation of each of the lines of sight relative to the perpendicular to the aircraft.

9. A system according to any one of Claims 2 to 8, for an aircraft wherein the power developed by the lifting means is modified by varying an altitude control system of one or more rotating blade assemblies, this altitude control system being controllable, characterised in that the control unit is capable of controlling the said altitude control system for controlling the power developed by the lifting means.

10. A system according to any one of Claims 2 to 8, for an aircraft (4) wherein the power developed by the lifting means is modified by varying the speed of rotation of a rotating blade assembly (10), this speed of rotation being controllable, characterised in that the control unit is capable of controlling the said speed of rotation for controlling the power developed by the lifting means.

11. A system according to any one of Claims 2 to 8, for an aircraft (152) wherein pitch is modified as a function of the position of a controllable pitch motivator (162), characterised in that the control unit (96) is capable of controlling the said position of the pitch motivator (162).

12. An aircraft, characterised in that it comprises a steering aid system according to any one of the preceding claims.